

## CHAPTER II

### DESIGN OF OPEN DRILL

#### JIGS

To give any rational rules or methods for the design of drill jigs would be almost impossible, as almost every jig must be designed in a somewhat different way from every other jig, to suit and conform to the requirements of the work. All that can be done is to lay down the principles. The main principles for jigs as well as fixtures were treated at length in Chapter I. It is proposed in the present chapter to dwell more in detail on the carrying out of the actual work of designing jigs.

Jig Drawings. — Before making any attempt to put the layout of the jig on paper, the designer should carefully consider what the jig will be required to do, the limits of accuracy, etc., and to form, in his imagination, a certain idea of the kind of a jig that would be suitable for the purpose. In doing so, if a model or sample of the work to be made is at hand, it will be found to be a great help to study the actual model. If the drawing, as is most often the case, is the only thing that is at hand, then the outline of the work should be drawn in red (or other colored) ink on the drawing paper, on which the jig is subsequently to be laid out, and the jig built up, so to speak, around this outline. The designing of the jig will be greatly simplified by doing this, as the relation between the work and the jig will always be plainly before the designer, and it will be more easily decided where the locating points and clamping arrangements may be properly placed. When drawing and projecting the different views of the jig on the paper, the red outline of the work will not in any way interfere, and when the jig is made from the drawing, the red lines are simply ignored, except to the extent to which the outline of the pieces may help the toolmaker to understand the drawing and the purpose of certain locating points and clamping devices.